NOTE XXVIII.

NOTE ON *ORCHESTIA PARVISPINOSA* M. WEBER, A TERRESTRIAL AMPHIPOD FROM JAVA

BY

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(With Plates 6 and 7).

During his stay in Java Mr. Edward Jacobson collected from 1909 to 1911 a small number of terrestrial Amphipoda which he has been good enough to hand over to me for identification. They all prove to belong to *Orchestia parvispinosa*, a species described from Java by Max Weber in 1892; Weber however had only female specimens and the male has remained unknown all these years. Mr. Jacobson's collection consists nearly all of females, as is usually the case with collections of terrestrial Amphipoda, but fortunately it contains one male which, though apparently not fully mature, is sufficiently developed to give a general idea of its chief characteristics. I therefore give a brief description of its gnathopoda and add one or two items of additional information about the species and its relationship to allied species.

Orchestia parvispinosa M. Weber.

Orchestia parvispinosa M. Weber, 1892, Zoolog. Ergebn. einer Reise in Niederländ. Ost-Indien, vol. 2, p. 566, figs. 17-19.
„ „ Stebbing, Das Tierreich, Lief. 21, Amphipoda, p. 541.

The list of specimens with the localities and circumstances under which they were collected as given by Mr. Jacobson, is as follows:

N°. 3140, Nongkodjadjar, 1200 m. above sea level, January 1911, collected between plants; one female, 7 mm. long.
„ 3141, ibid.; one female, 7 mm. long.
„ 3142, Gounoung Oungaran, 1000 m., December 1909, collected between plants; one female, 5 mm. long.
„ 3143, ibid.; October 1910, collected between plants; one female, 5 mm. long.
„ 3144, Kali Tountang, about 100 m., October 1910, on the wet stones at the foot of a waterfall; one female, 7 mm. long.
„ 3145, ibid.; one male, 7 mm. long.
„ 3146, Gounoung Gedeh, 1200 m., March 1911, collected between plants; one female, 7 mm. long.

These specimens agree closely with the descriptions given by Max Weber and Stebbing and I have no doubt they belong to this species. I add the following notes to their descriptions.

The inferior margins of the three segments of the pleon are slightly convex and bear no setae, the postero-lateral angle of the third is quadrate with slightly produced point and the hinder margin straight without serrations. The telson is triangular, narrowing to the end which bears a small notch with a spinule on the small rounded lobe on each side, each lateral margin bearing three other spinules of the same size at regular distances (Fig. 7).

The antennae present no distinguishing characteristics. In the male the side-plate of the first gnathopod (Fig. 1) is slightly narrowed inferiorly with the angles rounded and there are three or four small setae on the inferior margin; the basos is somewhat narrowed proximally and does not widen at the distal end; the merus has a small rounded pellucid lobe on its hinder margin; the carpus is about the same length as the propod, it bears a well marked rounded lobe on the hinder margin towards the distal end; the propod widens distally to the usual rounded lobe which widens gradually from the base of the propod; the finger and palm do not reach quite to the end of the lobe; the setae on the gnathopod are few and small; the basos, ischium and merus bear two or three on the hinder margin in each case, the carpus has three proximal to the lobe and another three on its distal margin, and there are three spaced along the anterior margin of the joint, the propod similarly has three small tufts on the anterior margin, those at the base of the finger being more slender than the others, there is a row of four marking the junction of the lobe with the joint proper, four others are placed on the lobe itself and three slender hairs are placed at the end of the palm.

In the second gnathopod of the male (Fig.2) the side-plate is rounded below and bears about seven small setae, posteriorly it is produced into a subacute process, with a deep emargination above it; the basos is rather broad except at the narrowed base, the merus is produced distally into a small rounded lobe, the carpus is short, subtriangular, the propod is broadly oval, the anterior margin convex and without setae except two very small ones at the base of the finger, the whole posterior margin is very convex and about half of it is occupied by the palm which is slightly oblique and is fringed with six small setae and has a shallow groove or pocket at the end into which the end of the strongly curved finger fits; the whole appendage is almost free from setae with the exception of those already mentioned.

In the female the first gnathopod (Fig. 3) is of the usual form and presents nothing noteworthy except that the propod is shorter than the carpus and is narrowed distally so that there is no appreciable palm and the gnathopod might be described as simple. The setae are rather long; their arrangement will be best learnt from the figure.

The second gnathopod of the female (Fig. 4) has the side-plate similar to that of the male, but with the posterior process rather more distinctly marked off from the margin below it and with a shallower emargination above it, the basos is rather broadened throughout, there are the usual rounded lobes on the merus, carpus and propod, that on the last extending well beyond the short oblique palm, a row of about ten small setae extends along the propod at the line of separation between the joint and the rounded lobe; the remaining setae are few and small.

The basal joints of the third to fifth peraeopods have the posterior margin well rounded with minute serrations, a minute seta being placed in each serration, the anterior margin bears a number of spinules; in the fifth peraeopod the basos is as broad as long. In both sexes the finger of the second peraeopod is not abruptly narrowed at the nail but resembles that of the first.

The three pleopoda are well developed and of about equal size.

The first uropod has the base longer than the equal branches, each of which in the female bears three spinules on the lateral margin in addition to those at the distal end; in the male the outer branch has no lateral spinules. The second uropod (Fig. 5) has the base as long as the inner branch which is a little longer than the outer, both branches bear three or four lateral spinules and a group of four of varying sizes at the end; there are three spinules on the upper lateral margin of the base and a longer one at the end. The third uropod (Fig. 6) has the base broad and longer than the small conical single branch; there are two spinules on the upper margin of the base and one or two at the end of the branch.

In the maxillipeds the fourth joint of the palp is absent altogether or represented by the barest vestige so that the species is properly placed under *Orchestia*, though in the somewhat long setae on the antennae and peraeopoda and the rather slender appendages it resembles *Parorchestia*; these characters however are probably directly associated with the terrestrial mode or life and are of little value in classification.

In many points the species appears to be close to *Orchestia platensis* Kröyer, a terrestrial Amphipod which has been recorded from the Mediterranean, the eastern parts of North and South America, the Maldive Archipelago, from the Hawaiian Islands [1]) and more recently from the Tuamotu Archipelago [2]). It differs from that species in having no serrations on the posterior margin of the third pleon segment and in having lateral spinules on both branches of the first uropods. This is true for the female examined, but as stated above the male of the same size has no lateral spinules on the outer branch. The antennae are perhaps a little shorter and the palm of the second gnathopod in the male rather more oblique, but these are characters that are liable to variation with age.

In both the specimens from Kali Tountang (Nos 3144 and 3145) the pigment of the eyes is abnormally arranged. In N°. 3144 it forms two oval patches with irregular margins extending along the dorsal surface of the head from the normal position of the eyes nearly to the posterior margin where the two patches converge and nearly meet. In N°. 3145 the pigment forms an irregular V-shape in the same position, the arms of the V being much narrower than the corresponding parts in N°. 3144. In both cases the ocelli are in the normal position but are mostly without pigment. The abnormal arrangement of the pigment in these specimens is probably due to some accident or injury, but as it is present in the two specimens collected at this locality under the same circumstances and not in any of the others, I have thought it worthy of being mentioned.

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1) Stebbing, Das Tierreich, Lief. 21, Amphipoda, p. 540 and Fauna Hawaiiensis, p. 527, pl. 21 A.

2) Chevreux, Mém. Soc. Zool. France, vol. 20, p. 494, fig. 14, 1908.

The type of the ♂ and the ♀♀ referred to in this paper (except N°. 3146) are now in the Leyden Museum.

Plymouth, February 1912.

DESCRIPTION OF FIGURES

(PLATES 6 AND 7).

Orchestia parvispinosa M. Weber.

Fig. 1. First gnathopod of male.
〃 2. Second gnathopod of male.
〃 3. First gnathopod of female.
〃 4. Second gnathopod of female.
〃 5. Second uropod (drawn from a female specimen).
〃 6. Third uropod 〃 〃 〃 〃
〃 7. Telson 〃 〃 〃 〃
[All the figures highly magnified].

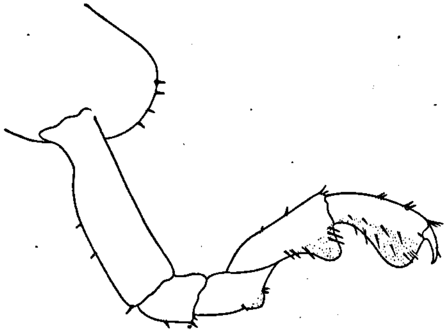


Fig. 1.

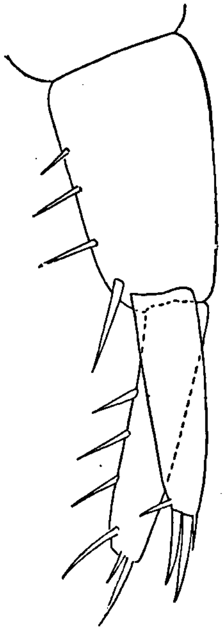


Fig. 5.

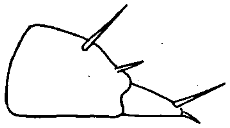


Fig. 6.

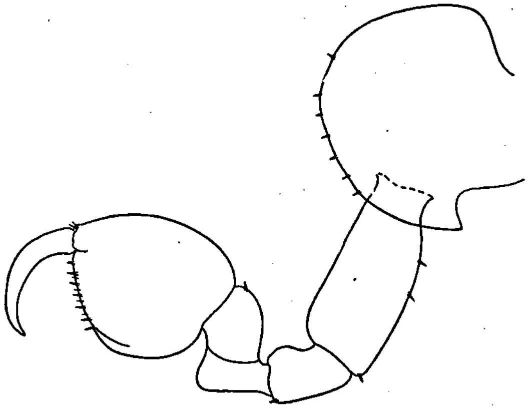
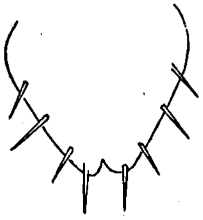


Fig. 2.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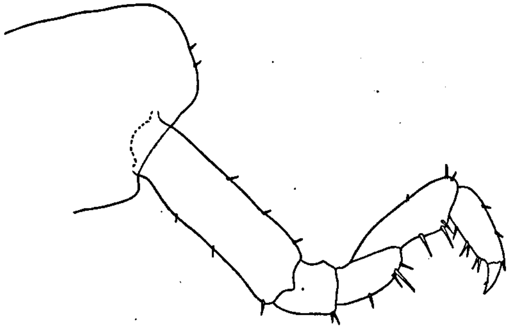
Fig. 3.

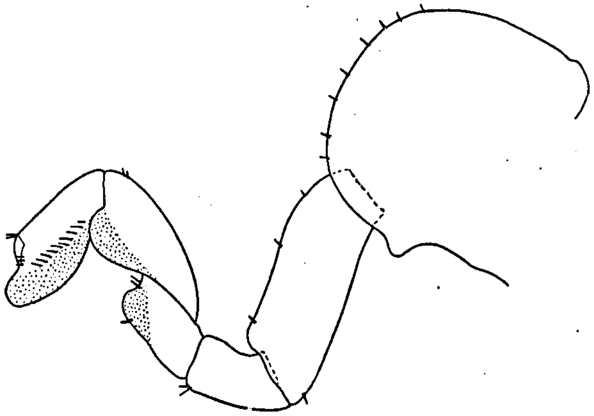
Fig. 4.

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ORCHESTIA PARVISPINOSA M. Weber.